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ABSTRACT

The objectives of the study underlying these excerpts were to assist the Kansas City School District (ICSD) in the formulation of policy on the consolidation and closing of schools, the development of objective criteria to aid decision-making on these issues, and the specification of procedures for the implementing of such policy and policy decisions. Achieving these objectives entailed performing a comprehensive literature search; reviewing--by correspondence and telephone--the experiences of 11 other school districts that had had recent similar experience; interviewing key KCSD administrators; reviewing the extensive and comprehensive study of the KCSD done in 1973; interviewing all current members of the school board; assembling 10 objective criteria for ranking the elementary schools; formulating a model policy statement; and developing and specifying procedures for implementing consolidation policy. The decision model, proposed board of education policy, and policy implementation steps are included here. The 10 objective criteria on which the decision model is based are the following (in order of adjudged importance): achievement levels, facility cost per pupil, space per pupil, teacher load, racial or minority balance, age and general condition of the buildings, auxiliary facilities, commuting distance, number of pupils, fuel requirements. (Author/IRT)

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DECISION CRITERIA, RETENTION INDEX AND POLICY FOR SCHOOL CONSOLIDATION

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For

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EA 007 917

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2

FOREWORD

The epitome of stability, U.S. public education has long gone about its job of teaching and acculturation of the young in traditional and time hallowed ways. This era of stability ended after the second World War.

Since that time, one problem has piled on another to challenge the wisdom of a Solomon and the patience of a Job. The rapid growth of American cities following World War II required giant facility expansion programs. These programs were beginning to catch up to the needs of new pupils when the landmark 1954 Supreme Court decision was handed down. The Court-ordered desegregation of schools undoubtedly contributed to the trickling reverse exodus--to the suburbs. The trickle became a torrent and the central portions of most American cities began a slow but seemingly inexorable deterioration.

Teachers, long a dedicated and respected though underpaid class of American society, rejected their continued relegation to second class economic citizenship and placed new demands on an already beseiged school treasury.

Failure fed upon failure. The fleeing taxpayers left behind a constituency that began a litany of revolt. Levy after levy, bond issue after bond issue was tried and failed.

The above characterization could be written about many major metropolitan areas of the U.S.

The decline of the central city and the diminishing school age population has brought the problem of physical plant utilization to a sharp focus. Declining enrollments at some schools, coupled with extremely tight budgets, make it mandatory to examine the efficient utilization of school facilities in order that limited resources be allocated for the optimum good. This issue, then, policy and decision criteria for addressing school consolidation, is the subject of this report.

Mr. Richard L. Salmon, Manager of Health and Education Programs, was the principal investigator. Miss Mary Cleveland, Operations Analyst developed the decision model and made other major contributions to the study.

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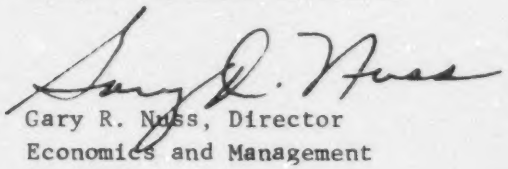

Gary R. Nuss, Director
Economics and Management
Science Division

EXCERPTS FROM

"Decision Criteria and Policy for School Consolidation"

MRI Project No. RA-115-D(1)

For

Kansas City School District

February 11, 1976

by

Richard L. Salmon

II. OBJECTIVES AND METHODOLOGY

The objectives of this study were to assist the Kansas City School District (KCSD) in the:

* formulation of policy on the consolidation and closing of schools;

* development of objective criteria to aid decision making on these issues; and

* specification of procedures for the implementing of such policy and policy decisions.

To achieve these objectives, a 6-week work plan was developed and executed. In these 6 weeks we:

* performed a comprehensive literature search--we cite appropriate research studies under References below;

* reviewed--by correspondence and telephone--the experiences of 11 other U.S. school districts that had had recent similar experience. These ranged from Montgomery County, Maryland, to Hayward, California;

* interviewed key KCSD administrators;

* reviewed the extensive and comprehensive study of the KCSD done in MRI's Civic Council Study of 1973;

* interviewed all current members of the KCSD School Board;

* assembled 10 objective criteria (based on all the above) for a ranking of all KCSD elementary schools. This ranking is a relative measure of the contribution of each school facility to the overall school system effectiveness;

* formulated a model policy statement; and

* developed and specified procedures for implementing consolidation policy.

The collective judgment of Board Members was used to formulate a decision model for facility ranking. The decision model is based on 10 objective criteria. The judgments of the members of the Board yielded the following criteria--listed in order of adjudged importance:

1. Achievement levels
2. Facility cost per pupil
3. Space per pupil
4. Teacher load
5. Racial or minority balance
6. Age and general condition of the buildings
7. Auxiliary facilities (gym, library, etc.)
8. Commuting distance
9. Number of pupils
10. Fuel requirements

The decision model was formulated as an additive function of the deviations from standard on each of the criteria, adjusted by the weighting algorithm to yield a single, composite "Index for Retention." The Index for Retention was used to rank all elementary schools in order of the feasibility of retention. This ranking is contained in the appendix.

The interviews were also very important in developing the recommendations for the specifics of policy as well as the procedures and strategy of policy implementation.

Since this report contains a list of all Kansas City School District elementary schools and these schools are very explicitly ranked--we should be very clear as to what this ranking <u>does not mean</u>. It is not a measure of the effectiveness of teachers, nor the efficiency of the school principals, nor the worth of academic programs and curricula. In general, it is not an evaluation of people or programs, per se.

It <u>is</u> a measure of the efficient use, relative effectiveness and contribution of that specific physical plant to the school system as a whole. Closing the school ranked at the top of the list would have the worst total effect. The school on the bottom would have the least total effect.

Finally, we should also point out two things. No one factor dominates this ranking. Ranking is a function of a combination of factors suitably weighted by the judgments of knowledgeable people. Secondly, because of the inherent measurement and prediction error in the data used and because of the imprecision of even the best of human judgment--we should not slavishly insist that the school ranked number one should not be number two nor that the school ranked 70th should not be 69th. We would estimate the precision of ranking to be $\pm$ 2 ranks.

THE DECISION MODEL

A. General

What is usually meant by the term "decision model" is an analytical formulation for aiding decisions. That is how we use the term. Such decision aids have become increasingly useful tools to assist policymakers in balancing off mutually incommensurable values. There are two very important reasons for this.

First, there is need to carefully separate quantifiable and demonstrable facts from judgment, prognostication, guess and pure speculation. Facts provide a critical portion of the decision basis--not all the basis, but an important portion. They can provide a focus point for generating agreement and consensus. The arraying and manipulation of these facts under thoughtful, rational and logical rules result in information useful to the decisions at hand. The logical rules for extracting information from data form an analytical model.

A second reason for using a model is the requirement for combining and weighing judgments on many factors simultaneously. People have no difficulty rendering judgment on one factor. Further, when such judgments are obtained from knowledgeable people, they tend to be good. They are even better when combined with similar judgments from other people. This is the philosophy underlying the forming of boards, advisory councils, elders, etc.

Unfortunately, when a composite judgment must be made which involves many factors of varying importance and severity--even the best minds do not integrate well and must be aided by an analytical framework. This framework is the decision model.

B. The Criteria

The 10 criteria forming the basis of the decision model were derived from correspondence with other metropolitan school districts; Kansas City School District publications--Recommendations on School Closings/Combinations and Educational Needs for Children; and discussions with the individual School Board members and the research literature.

A list of these criteria is contained in Table 2. The derivation of the ranks and weight will be discussed in the technical description following.

TABLE 2

FACTORS, RANKS AND WEIGHTS

Rank	Factor	Weight
1	Achievement Levels	9.862
2	Cost Per Pupil	9.597
3	Space Per Pupil	8.324
4	Teacher Load	6.915
5	Racial Balance	6.000
6	Age and General Condition of Building	,.000
7	Auxiliary Facilities	3.206
8	Commuting Distance	2.104
9	Number of Pupils	1.388
10	Fuel Requirements	0.142

Achievement levels are considered for the school in question as well as surrounding schools. To transfer pupils to a lower achieving school would, in part, defeat academic purposes. Thus, we say that if an administrative action does the pupil no good--it should at least do him no harm. If surrounding schools have a lower achievement level the "achievement" factor would contribute to the feasibility of retaining the school.

The cost per pupil for each individual school was considered in relation to the average cost per pupil for the district. A cost per pupil lower than the district average would increase feasibility of retention.

The space per pupil was defined as being the total square feet of the the school plant divided by the total current enrollment, including special education students. Space per pupil for each school was compared to the district average (111.087 square feet).* Space per student less than 100 square feet indicated overcrowding, while space per student greater than 120 square feet indicated inefficient utilization of the school plant. Thus, variations below 100 square feet or above 120 square feet were considered unfavorable to retention.

The teacher load was considered to be commensurate with the pupil/teacher ratio and the number of combined classrooms. A favorable pupil/teacher ratio, as indicated by district standards, would be 25 to 30 pupils per teacher.

* This figure is comparable to the results of a survey conducted by the Educational Facilities Laboratory, New York, of schools built during the period 1956-1958. This survey found the space per pupil for the North Central region of the U.S. to be 117 square feet.

A ratio below 25 would indicate inefficient utilization and a ratio above 30 would be considered an overload. All combined classrooms, more than one grade per teacher, violate the district standard of one teacher per grade. Deviations reduce the feasibility of retention.

The racial balance was considered somewhat like the achievement levels. If a school were to be closed and the students transferred, what effect would this have on the racial balance of the receiving school? A transfer of students which resulted in the racial balance of the receiving school approaching the overall district racial balance was considered favorable. If the transfer resulted in the racial balance of the receiving school moving further from the overall district racial balance, it was considered unfavorable.

The age of a school plant has been found to be highly correlated with expenditures for remodeling and repairs. Thus, the ages of the individual school plants were compared to the District average. Those whose ages were less than the average were considered to need fewer repairs and remodeling, while those whose ages were greater than the average were considered to need more repairs and remodeling. Thus, old schools are less feasible for retention, other things being equal.

The individual schools were rated as to whether or not they had the following auxiliary facilities: cafeteria, health, library or resource center, and auditorium. Lack of any of these facilities was considered unfavorable.

Any additional commuting distance was considered unfavorable. The additional commuting distance for purposes of this model was the distance to the nearest receiving school.

The number of pupils refers to the average enrollment for the next 5 years. All school closings are unfavorable from the vantage point of the students transferred. Thus, the greater the number of students involved, the more feasible is retention.

Fuel requirements of the individual schools were considered to be of minimum importance in deciding upon school closings/combinations. Therefore, they have been eliminated as a criterion in this decision model. However, in view of the current "energy crisis," fuel shortages may well play a qualitative role in decisions involving school closings and combinations.

C. Other Qualitative Factors

There are several nonquantitative factors, which, by their nature, are unable to be expressed in the decision model. They should, nevertheless, be considered in school facility decisions. They are:

1. Community impact: The very nature of its function often causes the neighborhood school to be a focus of community affairs.

2. Psychological and cultural impact on affected students: Very often the transfer of a cultural or ethnic group of students to a culturally different environment can have a very debilitating effect on their learning abilities.

3. Safety and security: Although a transfer may involve only a few blocks additional walk to school--a new safety hazard may be introduced, an intersection with heavy traffic, a railroad track, etc.

4. Ability to relate to physical environment: An elementary school pupil undergoes a phased, gradual expansion of his world of learning. First his nursery, then his home and yard, then his block and neighborhood school. He can relate to this and has familiar physical and psychological landmarks. If he is transported for several miles to be among strangers, the tempo of this unfolding world is broken.

We do not believe the presence or potential of any of these factors should be decisive. They can all be ameliorated by operational and academic actions and provisions. They are considerations, however, that must be weighed against the quantitative indicators and against the dictates of limited financial resources.

D. Technical Description

The decision model is multidimensional scaled, nonmetric and is formulated as follows:

Index of Retention:

$$9.862\ (Ach_S - Ach_R) + 9.597\ (100 - {}^{C/P_S}/_{C/P_D}) - 8.324\ (\Delta\ S/P_S)$$

$$- 6.915\ (\Delta\ TL_S) + 6\ (\Delta\ Min_{R+S} - \Delta\ Min_R)$$

$$+ 5\ (Age_D - Age_S) - 3.206\ (25 - \#\ facilities\ lacking_S)$$

$$- 2.104\ (\Delta\ CD) - 1.388\ (\#\ pupils)$$

where,

(Ach_S - Ach_R) is the achievement index of the sending school minus the achievement index of the receiving school

(100 - $C/P_S/C/P_D$) is the percent deviation from the District's average cost per pupil, C/P_D, of the sending school's cost per pupil C/P_S. $C/P_S/C/P_D$ is expressed in a percent.

(Δ S/P_S) is the percentage deviation either above or below the 100-120 square feet per pupil.

(Δ TL_S) is the percentage deviation either above or below the standard teacher/pupil ratio of 25-30 plus the percentage of combined classrooms in the sending school.

(Δ Min_{R+S} - Δ Min_R) is the absolute difference between the percent of minority students in the receiving school when combined with the sending school and the percent of minority students in the District minus the absolute difference between the percent of minority students in the receiving school and the percent of minority students in the district.

(Age_D - Age_S) is the average age of school plants within the district minus the age of the school plant of the sending school.

(25 # of facilities $lacking_S$) is 25 percent times the number of auxiliary facilities that the sending school lacks.

(Δ CD) is the distance between the sending school and receiving school.

(# pupils) is the projected average enrollment over the next 5 years of the sending school.

The constants represent the weights assigned to each factor. These weights were derived as follows.

Each individual board member was asked to arrange the factors in what he or she thought to be the order of importance. The most important received a weight of 10, second of 9, and so forth. The factor which received the highest overall weight was considered to be most important and received a weight of 10, etc.

The weights were then adjusted for the divergence of opinion on each individual factor. A "S" statistic (measure of divergence from the mean) was computed for each factor. This factor was then summed downward continuously for factors ranking 10 to 5 and upward continuously for factors ranking 1 to 5. The weight for each rank was then computed as follows:

For ranks 10-5:

$$W_i = 10 - 4\sum_{j=1}^{i} (S_i/281.19)$$

For ranks 1-5:

$$W_i = 5 \sum_{j=1}^{i} (S_i/290.55)$$

where,

W_i = weight of factor i

S_i = cumulative sum for factor i

Table 3 depicts each factor's composite weight, S statistic, cumulative sum, and computed weight.

Tables following 3 are the computed and ranked retention units.

TABLE 3

FACTORS' COMPUTED WEIGHTS

Composite Rank	Factor	S	$\sum_{i} S_i$	Weight
10	Achievement Levels	64.00	64.00	9.862
9	Cost Per Pupil	14.89	78.89	9.597
8	Space Per Pupil	71.61	150.50	8.324
7	Teacher Load	79.21	229.71	6.915
6	Racial Balance	51.48	281.19	6.000
			- - - - - - - -	
5	Age and General Condition of Building	104.24	290.55	5.000
4	Auxiliary Facilities	64.04	186.31	3.206
3	Commuting Distance	41.61	122.27	2.104
2	Number of Pupils	72.42	80.66	1.388
1	Fuel Requirements	8.24	8.24	0.142

KANSAS CITY SCHOOL DISTRICT ELEMENTARY SCHOOLS RANKED
BY EFFECTIVENESS OF SCHOOL FACILITIES

Rank	School	Total Expenditures[a]	Current Regular Enrollment[b]	Projected Regular Enrollment[b,c]	Special Education Enrollment	Cost Per Pupil[a]	Space Per Pupil[d]	Percent Combined Classrooms[e]	Teacher/ Pupil	Achievement Index[f]	Age of Building (Yrs)	Achievement Differential[g]	Composite Racial Balance[h]	Miles to Nearest School	Auxiliary Facilities: Food	Health	Library	Auditorium
1	Weeks	$499,986.84	874	761	52	$476.13	74.9	9.52	29.7	91.75	5	- 0.68	+ 1.01	0.24	X	X	X	X
2	Franklin, C.A.	460,060.76	776	653	46	477.90	88.3	--	30.9	87.21	5	- 7.24	+ 0.84	0.14	X	X	X	X
3	Melcher	238,251.52	629	639	0	395.11	65.6	10.53	30.3	107.33	13	+14.57	- 1.39	0.17	X	X		X
4	Richardson	309,055.26	579	521	0	431.84	81.1	5.26	29.8	98.15	10	+10.94	+ 0.19	0.14	X	X	X	X
5	Askew	282,866.52	573	624	25	395.61	88.9	16.67	30.7	111.62	51	+ 9.85	- 2.74	0.33	X	X	X	X
6	Whittier	304,990.53	747	582	17	387.06	76.3	4.35	31.6	104.88	15	+ 0.33	+ 1.03	0.28	X	X	X	X
7	Knotts	249,459.62	671	674	0	346.95	76.3	--	30.3	105.39	50	+15.82	+ 2.11	0.26	X	X		X
8	Korte-North Rock Creek	502,597.86	820	708	119	425.70	64.9	--	30.5	126.96	21/50	+ 4.04	+ 0.63	0.33	X	Y	X	X
9	Sugar Creek	103,354.50	251	255	0	402.15	98.0	--	30.6	127.19	18	+17.76	+ 1.07	0.36	X	X	X	X
10	Troost	228,898.29	617	762	14	437.66	72.8	16.67	31.3	81.82	52	+19.61	- 5.45	0.28	X	X	X	X
11	Woodland	256,707.84	624	611	24	420.83	117.2	4.76	29.9	93.94	52	- 9.77	+27.96	0.19	X	X		X
12	Kumpf	333,747.92	736	634	0	378.34	69.6	--	31.6	96.19	56	+ 2.44	--	0.28	X	X		X
13	Chick	216,007.08	370	490	0	422.71	112.4	0.00	32.4	95.12	43	+ 7.91	- 3.58	0.33	X	X	X	X
14	Pershing	281,702.47	752	619	0	356.58	92.7	--	32.7	86.87	50	+ 5.05	+ 6.75	0.28	X	X	A	X
15	Linwood	242,934.48	600	334	0	407.60	129.8	7.69	29.4	92.60	19	+ 5.39	+ 0.32	0.14	X	X		X
16	Nichols	193,683.83	466	414	0	396.85	108.3	7.69	29.6	140.66	48	+ 8.50	- 2.18	0.33	X	X	X	X
17	Pinkerton	188,933.32	474	512	29	380.14	87.5	26.67	29.9	99.41	44	+14.39	+ 0.88	0.33	X	X		X
18	Ladd	404,608.39	763	599	1	395.51	102.3	9.09	30.4	99.41	62	+ 1.26	--	0.19	X	X		X
19	Garfield	244,491.04	515	581	0	403.45	76.7	25.00	30.6	103.62	12	+ 9.68	-32.34	0.19	X	X		X
20	Scarritt	251,596.75	507	478	35	400.63	100.4	12.50	31.0	106.55	48	+ 0.93	+10.12	0.24	X	X		X
21	Graceland	236,453.52	571	555	0	350.30	70.6	--	30.9	87.21	49	-10.94	+ 0.72	0.19	X	X	X	X
22	Meservey	326,025.73	637	615	10	412.16	82.0	15.79	30.2	92.63	46	+ 0.68	- 0.70	0.24	X	X		X
23	Faxon	272,092.03	505	473	3	446.75	98.6	--	29.3	94.65	63	+ 7.24	- 0.52	0.14	X	X	X	X
24	Willard	312,235.68	766	669	20	374.83	56.6	--	30.0	98.15	50	+10.94	- 0.95	0.19	X	X		X
25	Ashland	292,415.69	522	485	14	410.12	106.5	11.76	30.6	101.77	61	+14.90	-13.46	0.28	X	X		X
26	Border Star	300,365.83	552	425	77	441.06	87.5	--	30.8	137.04	49	- 3.62	+ 5.30	0.33	X	X	X	X
27	Seven Oaks	200,022.00	479	480	0	361.70	87.3	6.67	30.4	92.76	47	-14.57	+ 1.07	0.17	X	X		X
28	Three Trails	188,735.91	304	257	0	507.35	110.8	22.22	29.8	138.47	21	+11.53	- 0.35	0.47	X	Y	X	X
29	Twain	239,263.99	611	665	10	342.29	60.1	17.65	31.2	85.02	59	-14.39	- 1.04	0.33	X	X	X	X
30	Greenwood	279,690.53	532	617	0	394.48	101.8	--	28.6	86.87	68	- 4.63	- 0.39	0.21	X	X	X	X
31	Switzer	222,242.22	595	450	0	321.62	77.8	8.70	28.1	91.75	60	-11.62	- 5.28	0.31	X	X	X	X
32	Kensington	283,643.91	441	381	109	429.07	89.3	9.09	29.9	115.32	59	+10.10	+ 2.94	0.19	X	X	X	X
33	Moore	165,772.68	361	296	8	390.97	106.8	--	31.7	96.66	59	+ 9.77	- 0.87	0.28	X	X		X
34	Marlborough	167,108.76	279	329	57	482.97	123.4	11.11	30.0	103.71	47	+14.14	- 9.48	0.33	X	X	X	X
35	McCoy	221,194.39	424	403	0	384.01	98.9	14.29	29.1	125.22	59	-10.10	- 2.38	0.19	X	X	X	X
36	Rock Creek, West	111,207.26	238	227	0	437.82	115.4	53.33	30.1	116.50	18	+28.11	- 2.08	0.36	X	X	X	X
37	Blenheim	240,718.34	526	462	59	429.85	105.2	7.14	31.2	89.57	50	-15.82	- 1.86	0.26	X	X		X
38	Holmes	316,132.19	733	565	0	443.38	80.5	4.17	29.3	96.97	71	+ 4.01	--	0.26	X	X		X
39	Gladstone	166,565.51	319	228	0	397.53	115.7	12.50	29.1	111.62	59	+ 7.07	+ 0.39	0.28	X	X	X	X
40	Bryant	239,910.93	461	423	95	405.94	74.8	7.69	31.4	136.70	59	- 0.34	+ 1.07	0.26	X	X	X	X
41	Logan	200,206.01	365	363	0	475.54	104.3	27.27	30.0	96.05	19	+ 1.60	-34.36	0.24	X	X		X
42	Fairview	165,648.29	241	215	0	498.94	116.1	25.00	30.1	120.37	17	+ 2.19	- 0.62	0.19	X	X	X	
43	Mann	311,784.30	545	429	0	369.61	95.9	22.22	28.2	91.75	70	- 2.70	+ 0.61	0.14	X	X		X
44	Fairmount	168,329.10	371	321	0	414.88	117.9	33.00	31.8	90.43	49	+ 3.28	+ 5.81	0.24	X	X		X

Rank	School	Total Expenditures[a]	Current Regular Enrollment[b]	Projected Regular Enrollment[b,c]	Special Education Enrollment	Cost Per Pupil[a]	Space Per Pupil[a]	Percent Combined Classrooms[c]	Teacher/ Pupil	Achievement Index[f]	Age of Building (Yrs)	Achievement Differential[g]	Composite Racial Balance[h]	Miles to Nearest School	Auxiliary Facilities			
															Food	Health	Library	Auditorium
45	Bowcroft	$301,519.03	794	637	11	$352.7[illegible]	66.1	12.00	30.7	92.76	70	- 1.43	-28.87	0.33	X	X		X
46	Fitcher	239,563.10	659	610	0	405.35	73.1	21.43	31.3	118.18	49	- 2.19	+ 1.15	0.19	X	X		X
47	James	285,298.85	564	496	0	515.91	81.2	6.25	28.3	117.09	63	+ 5.47	- 5.38	0.28	X	X	X	X
48	Douglass	140,653.55	261	251	0	536.84	133.7	33.33	28.5	103.37	20	+11.62	+ 2.80	0.31	X	X		X
49	Manchester	156,133.07	295	297	0	414.14	136.2	--	27.7	98.24	56	- 6.98	+ 2.42	0.24	X		X	X
50	Hartman	212,900.14	338	284	0	560.35	145.2	9.09	31.0	108.92	20	- 7.66	- 0.66	0.43	X	X	X	X
51	Yates	297,150.86	360	333	59	662.85	136.3	7.14	30.3	91.75	58	- 2.19	+ 0.05	0.21	X	X	X	X
52	Cook	227,439.58	307	246	56	657.62	105.2	11.11	30.8	132.16	51	- 8.50	+1.74	0.33	X	X	X	X
53	Carlisle	126,749.87	190	228	0	663.71	144.5	75.00	29.7	131.73	16	+25.58	+ 9.66	0.33	X	X		X
54	Wheatley	249,226.40	423	353	19	572.81	153.2	7.69	29.0	91.50	20	-18.69	+ 0.06	0.39	X	X		X
55	Longfellow	207,089.42	352	283	0	382.08	163.8	--	28.7	90.58	-8	- 5.47	-14.09	0.76	X	X	X	X
56	Bristol	280,747.23	571	450	0	613.67	86.2	25.53	30.1	122.90	68	+ 1.70	+ 1.70	0.26	X	X		X
57	Nelson	135,966.96	321	275	0	360.65	117.7	25.00	28.6	104.63	50	-32.07	- 7.82	0.36	X	X	X	X
58	Harrison	183,276.01	390	336	33	376.33	112.6	20.00	29.3	104.55	60	- 5.64	-48.77	0.47	X	X	X	X
59	Walker	119,637.23	270	222	0	369.11	120.8	22.22	38.2	113.89	61	- 6.68	-10.41	0.21	X	X	X	X
60	Thacher	211,612.66	432	432	0	392.95	70.8	7.69	28.8	102.78	74	-14.31	+ 3.82	0.31	X	X		X
61	Phillips	189,906.93	353	336	0	456.31	142.8	18.18	31.2	90.58	42	-19.61	+ 0.18	0.19	X	X		X
62	Garrison	149,666.77	263	228	0	628.84	115.0	11.11	28.7	103.71	84	+ 9.77	-11.96	0.19	X	X		X
63	Clay	172,840.40	295	227	31	498.09	143.6	22.22	32.4	112.21	68	+13.97	+ 3.58	0.28	X	X	X	X
64	Attucks	221,714.68	265	221	62	678.86	142.1	33.33	29.6	111.95	69	+21.37	- 0.29	0.26	X	X		X
65	B. T. Washington	189,847.45	303	242	6	666.45	142.8	33.33	30.0	110.19	86	+18.69	- 0.86	0.09	X	X	X	
66	Mt. Washington	183,770.59	367	296	0	513.32	135.9	25.00	29.5	106.15	71	- 3.78	- 5.36	0.24	X	X		X
67	Rollins	119,626.89	185	155	16	684.31	149.6	20.00	31.0	108.00	70	+ 3.45	+10.73	0.71	X	X		X
68	Buhl	133,369.56	207	158	0	501.31	146.0	33.33	32.0	116.58	47	-15.58	- 5.85	0.40	X	X	X	X
69	Martin	70,763.63	118	87	27	397.14	186.1	66.67	26.3	89.06	19	-16.56	+ 3.63	0.33	X	X	X	X
70	Delaney	188,192.77	194	179	50	609.03	183.8	33.33	26.2	[illegible]2.94	59	+22.39	+ 6.63	0.26	X	X	X	X
71	Karnes	295,171.56	258	219	97	609.85	214.2	37.50	[illegible]0.6	95.71	59	- 8.00	+ 6.41	0.19	X	X	X	X
72	Stark	75,983.02	103	92	0	550.60	204.6	66.67	27.0	88.39	44	-28.11	+ 0.89	0.38	X	X	X	X
73	Hansen	138,230.25	169	193	16	645.93	201.7	66.67	29.2	107.41	68	- 6.68	+ 7.36	0.71	X	X		X
74	Allen	135,551.77	74	55	79	724.97	298.8	100.00	25.2	106.55	62	- 3.45	+10.88	0.71	X	X		X
75	Pleasant Valley		13		0		[illegible]2.0	100.00	6.5		16							X

NOTES TO TABLE

a/ Includes all costs which are assigned directly to school site with the exception of cafeteria costs: Principals, teachers, teachers aides, utilities, librarians, teaching supplies, office supplies, health supplies, contracted maintenance, replacement--furnishing and equipment, capital outlay, clerical, custodians, library books, textbooks, contracted services, custodial supplies. Based on 1971-72 figures supplied by the School District.

b/ Total enrollment grades K-7, excluding special education students.

c/ Average annual enrollment over next 5 years.

d/ Expressed in square feet. Based on current enrollment, including special education pupils.

e/ Regular classrooms containing two or more grade levels in relation to total classrooms. Classrooms containing special education pupils were omitted for purposes of this analysis, as these students are not grouped by grade.

f/ This index was derived from the Iowa Basic Skill Test scores as listed in the Report of Measured Achievement and Scholastic Aptitude, 1972-1973. An overall score for each the third and sixth graders within the total district was computed as being the norm or median of the individual item test scores as given for the system. A norm was then computed from the individual item test scores for the third and sixth graders within each school. Two ratios were then developed for each school: the norm for the third graders within that school to the norm for the third graders throughout the district and the norm for the sixth graders within that school to the norm for the sixth graders throughout the district. The index was computed as the average of these two ratios.

g/ The difference in achievement index between the sending school and receiving school. Negative values indicate the sending school has a lower achievement index than the receiving school. Positive values indicate the sending school has a higher achievement index than the receiving school.

h/ The effect on the racial balance of the receiving school. Positive values indicate that the transfer of students would cause the racial balance to move away from the overall district balance. Negative values indicate that the transfer of students would cause the racial balance to more toward the overall district balance.

PROPOSED BOARD OF EDUCATION POLICY ON
SCHOOL CONSOLIDATION

WHEREAS, Elementary school enrollment has been declining at several attendance centers in the Kansas City School District, and this trend is expected to continue in the coming years, and

WHEREAS, The cost of operating and modernizing elementary schools with small enrollments is significantly more per pupil than in larger schools, and

WHEREAS, There is a continuing need to utilize available resources effectively, and

WHEREAS, Substantial savings in operating costs could be realized by consolidating small schools or by sharing services among small schools, and

WHEREAS, Capital budget savings can be realized by eliminating modernization projects in small schools whose enrollments can be transferred to neighboring schools with available space, and

WHEREAS, It is recognized that a community will evidence concern when faced with the possibility of a school consolidation; now therefore be it

Resolved, That it is mandatory that all small schools be reviewed annually utilizing the criterion and factors established in the 1974 MRI Consolidation Study in order to determine their future use; and be it further

Resolved, That major modernization not be recommended for a small school until a careful review of alternatives has been carried out and its future determined; and be it further

Resolved, That the community advisory/decision-making process and timetable recommended in the 1974 MRI Consolidation Report be followed in considering the future of each small school.

IV. POLICY IMPLEMENTATION

Community involvement--the lack of which has precipitated much criticism of the KCSD school administration--is the one major addition to current practices in consolidations. We would recommend a chronology of activities to include community involvement in the following manner.

A. Administrative Action

In the late fall of each year, the administration will prepare an updated listing of schools, ranked by the recommended criteria. Associated operating details and qualitative factors will be developed on those ranking in the bottom 10 to 20. This report will be presented to the Board in January.

B. Board Action

The Board of Education will approve the report and establish a Local Evaluation Committee for each school or school cluster area. The committee will include representation from the administration and the community. Recommendations on the membership of such committees might come from local principals, PTA leaders, civic association leaders, and others. Committees should be appointed in January. Committees are one-time task forces but might continue in operation through implementation of final actions.

C. Local Evaluation Committee Action

The main objective of this committee is to provide a local evaluation report. The report should be on a timely basis--4 to 6 weeks--and should:

* Suggest alternatives that are reasonable and achievable.
* Assess impact of each alternative on quality of education.
* Analyze factors which bear on alternatives.
* Identify other uses for school facilities.
* State probable community reaction to each alternative.
* Indicate committee preferences but indicate significant dissenting views.

The administration representative should operate as liaison for the committee in assembling any required information or data from central administration files.

The local evaluation report should be rendered by the first of March.

D. Final Action of the Board

The Board would receive the report, administration comments and such additional information as is deemed desirable by April. Hearings, if required, would be scheduled for April and May and a decision would be made in May or June to become effective in the beginning of the following academic year, i.e., the next following September. These decisions could be any of the following:

* Close the school.

* Reduce operating costs by sharing staff or services with a neighboring school.

* Expand the school by moving children in from adjacent schools.

* Convert the school to other academic use, e.g., model school.

* Do nothing.

REFERENCES

Manuals

Kansas City, Missouri, Public Schools, Budget, 1973-1974.

The School District of Kansas City, Missouri, Educational Specifications and Standards for Elementary Schools. Educational Needs for Children. Prepared by Eugene V. Walkey, Lillian Orme and Edythe Darton. Revised January 9, 1974.

School District of Kansas City, Missouri, School Management Division Recommendations, School Closings/Combinations, Second Semester, School Year 1973-1974, Working Paper. Prepared by Ruth Kempton, Lilliam Orme, and Eugene V. Walkey. December 12, 1973.

Periodicals

Brookes, J. E. "Operational Research in Educational Administration." Education and Urban Society, Vol. 3, No. 1, November 1970.

Carpenter, Margaret B. "Cost-Effectiveness Analysis for Educational Planning." Educational Technology, October 1970.

Collman, Peter. "Organizational Effectiveness in Education: Its Measurement and Enhancement." Interchange, Vol. 3, No. 1, 1972.

Eastman, Charles M. and Kenneth O. Kartanek. "Modeling School Facility Requirements in New Communities." Management Science, Vol. 16, No. 12, August 1970.

Hacker, Thorne. "Management by Objectives for Schools." Administrator's Notebook, Vol. 20, No. 3, November 1971.

Leggett, Stanton. "How to Forecast School Enrollments Accurately--and Years Ahead." The American School Board Journal, January 1973.

McNamara, James F. "Mathematical Programming Models in Educational Planning." Review of Educational Research, Vol. 41, No. 5, December 1971.

"Special Report--What to do if Shrinking Enrollment Forces You to Shut a School." Nation's Schools, Vol. 91, No. 2, February 1973.

O'Brien, Richard J. "Model for Planning the Location and Size of Urban Schools." Socio-Econ. Plan. Sci., Vol. 2, pp. 141-153 (1969).

Ploughman, T., W. Darnton and W. Heuser. "An Assignment Program to Establish School Attendance Boundaries and Forecast Construction Needs." Socio-Econ. Plan. Sci., Vol. 1, pp. 243-258 (1968).

Smith, C. Selby. "Resource Allocation in Education." The Journal of Educational Administration, Vol. 9, No. 2, October 1971.

Reports

Clark, Stephen C. Urban Education Systems Analysis. National Center for Educational Statistics (DHEW). Report No. NCEJ-TN-24. ED-013-528. January 20, 1967.

O'Brien, Richard J. Cost Model for Large Urban Schools. National Center for Educational Statistics (DHEW). Report No. NCES-TN-30. ED-013-527. April 26, 1967.

A Model for the Determination of School Attendance Areas Under Specified Objectives and Constraints. National Center for Educational Statistics (DHEW). Report No. TN-55. ED-018-859. January 22, 1968.

O'Brien, Richard J. and Jeralyn R. Lyle. Outline of an Educational Model. National Center for Educational Statistics (DHEW). Report No. TN-57. ED-018-860. January 22, 1968.

School Submodel for Large Urban Schools. National Center for Educational Statistics (DHEW). Report No. NCES-TN-38. ED-013-500. June 21, 1967.